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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,442	12/05/2001	Tejraj Aminabhavi	069686.0102	3362

7590 10/10/2003

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EXAMINER

MENON, KRISHNAN S

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 10/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/007,442	Applicant( ) AMINABHAVI ET AL.	
	Examiner Krishnan S Menon	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 5-29 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 2 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 3,4 and 30-34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>0503</u> | 6) <input type="checkbox"/> Other:  |

## DETAILED ACTION

### *Claim Objections*

Claims 30-34 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must be only in the alternative. See MPEP § 608.01(n).

Dependency of Claims 30-34 will be considered in the alternative, and will be split to two groups, one group depending from claim 1 and the other group from claim 5 for examination purposes.

Claims 3 and 4 are objected to because of the following informalities: The structures in the claims show I- (Iodide) radicals, which the examiner believes are typographical errors, and should be 'Chloride'. Appropriate correction is required.

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-4, drawn to Anion exchange membrane, classified in class 210, subclass 500.42.
- II. Claims 5-6, drawn to Cation exchange membrane, classified in class 210, subclass 500.42.
- III. Claims 7-24, drawn to process of making anion exchange membrane, classified in class 526, subclass 237.
- IV. Claims 25-29, drawn to process for making cation exchange membrane, classified in class 156, subclass 246.
- V. Claims 30-34, depending from claim 1, drawn to use of anion and cation exchange membranes in electrodialysis, classified in class 204, subclass 522.

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Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are for two different products having different functions.

Inventions III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions the inventions are the process for making two different products having different functions.

Inventions I and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process could be used for making another materially different product like ion exchange resin.

Inventions II and IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process could be used for making another materially different product like ion exchange resin.

Inventions in Groups I and V are related as product and process of using the product.

During a telephone conversation with Michelle Lecoite, attorney of record (registration # 46861) on 9/15/03 a provisional election was made without traverse to prosecute the invention of group I, claims 1-4. Affirmation of this election must be made by applicant in replying to this Office

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action. Claims 30-34 depending from claim 1 (henceforth 30(1), 31(1), etc.) will be examined with claims 1-4. Claims 5-29 and claims 30-34 depending from claim 5 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Applicant is reminded that since the product claims 1-4 of group I are elected, corresponding process claims (Group III, claims 7-24) would be allowable if product claims are found allowable and if the process claims contain all the limitations or are dependent on the product claims.

### *Drawings*

The drawings (fig 3,6 and 7) show I- radical in place of Chloride radicals, which seem to be a typographical errors. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

### *Allowable Subject Matter*

Claims 1 and 2 are allowed.

Claims 3 and 4 are objected to for the minor informalities (error in polymer structure), but would be allowable if corrected for the errors.

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Claims 30(1) – 34(1) (claims 30-34, depending from claim 1) are objected to as being improper multiple dependent claims, but would be allowable if rewritten in proper form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The closest prior arts are Bartels (US 5,192,445) which teaches poly (4-vinyl pyridine) membrane cross-linked with dibromobutane, Waite (US 5,147,553) which teaches selectively permeable membrane which contain poly (4-vinyl pyridine) and epichlorohydrin, and Minchak et al (US 4,522,902) which teaches forming membranes with materials from among a large group of compounds, which include epichlorohydrin, aniline, and vinyl pyridine. None of the cited references teach forming poly (4-vinyl pyridine) membrane on a woven support, followed by cross-linking with epichlorohydrin and aniline as in claim 1. Claims 30(1) – 34(1) recite a process of electrodialysis using the membrane of claim 1, and therefore, allowable, if written in the proper form.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 703-305-5999. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 703-308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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Krishnan Menon  
Patent Examiner

  
**JOSEPH DUDGE**  
**PRIMARY EXAMINER**